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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/807,181	06/15/2001	Joerg Schwenk	2345/152	3107
26646	7590	05/17/2005	EXAMINER	
KENYON & KENYON ONE BROADWAY NEW YORK, NY 10004			SON, LINH L D	
			ART UNIT	PAPER NUMBER
			2135	

DATE MAILED: 05/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/807,181

Applicant(s)

SCHWENK, JOERG

Examiner

Linh LD Son

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This written action is responding to the amendment received on 01/31/05.
2. Claims 4-6 are pending.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 4-6 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The language of the claim raises a question as to whether the claim is directed merely to an abstract idea that is not tied to a technological art, environment or machine which would result in a practical application producing a concrete, useful, and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101. Claims 4-6 consist solely of mathematical operations without practical application in the technological arts or simply manipulate abstract ideas without practical application in the technological arts.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 4-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Caronni et al, US Patent No. 6049878, hereinafter "Caronni".

7. As per claim 4, Caronni discloses "A process for establishing a common cryptographic key for n subscribers using the Diffie-Hellman process" in (Col 2 lines 59-67). *"Comprising: assigning the n subscribers respective leaves of a binary-structured tree which has a root (TEK), n Leaves, is of depth $\lceil \log_2 N \rceil$ and has tree-nodes, for each one of the n subscribers, generating a respective secret, the respective secret being assigned to the one of the n Leaves to which the one of the n subscribers is assigned"* in (Col 6 lines 20-40, lines 50-65, and Figure 4); *"establishing secrets consecutively in a direction of the root of the tree for all k nodes of the tree starting from the n Leaves of the tree across an entire hierarchy of the tree, wherein two already known secrets are combined using the Diffie-Hellman process to form a new common secret, the new common secret being allocated to a common node so that a common cryptographic key for all n subscribers is allocated to a last one of tree nodes, the last one of the tree nodes being the root of the tree"* in (Col 2 lines 59-67, and Col 8 line 55 to Col 9 line 10).

8. As to dependent claim 5, Caronni discloses *"The process as recited in claim 4, further comprising: adding a new subscriber to the n subscribers of the tree so that there are $n+1$ subscribers of the tree, the adding step including: adding two new leaves as successors to a selected one of the n Leaves of the tree so that the new tree has $n+1$ Leaves and is of depth $\lceil \log_2$*

(n+1)1]” in (Col 10 lines 13-27) ; “assigning the one of the n subscribers to whom the selected one of the n Leaves is assigned one of the two new Leaves and assigning the new subscriber to another one of the two new Leaves, the selected one of the n Leaves becoming a common node for the two new Leaves, and starting from the new Leaves in a direction of the root of the tree, establishing new secrets only in those of the tree nodes which lie within a framework of the tree on a path from the two new Leaves to the root of the tree” in (Fig 4, Col 9 lines 5-25, and Col 10 lines 13-27).

9. As to dependent claim 6, Caronni discloses “The process as recited in claim 4, further comprising: excluding a selected one of the n subscribers from the tree, the excluding steps including: removing a first one of the n leaves of the tree to which the selected one of the n subscribers is assigned; removing a second one of the n leaves, the second one of the n leaves sharing a common node with the first one of the n leaves, the common node with the first one of the n leaves becoming a new leaf assigned to the one of the n subscribers to which the second one of the n leaves is assigned; and starting from the new leaf of the tree in a direction of the root of the tree, establishing new secrets only in those of the tree nodes which lie within a framework of the tree on a path from the new leaf to the tree root” in (Col 8 lines 21-33, lines 45-55, and Col 9 lines 5-9).

Response to Arguments

10. Applicant's arguments, see Amendment, filed 01/31/05, with respect to the rejection(s) of claim(s) 4-6 under 35 U.S.C. 102(e) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Caronni.

Conclusion

11. Any inquiry concerning this communication from the examiner should be directed to Linh Son whose telephone number is (571)-272-3856.

12. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Kim Y. Vu can be reached at (571)-272-3859. The fax numbers for this group are (703)-872-9306 (official fax). Any inquiry of general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is (571)-272-2100.

13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval IPAIR.I system. Status information for published applications may be obtained from either Private PMR or Public PMR. Status information for unpublished applications is available through Private PMR only. For more information about the PAIR

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system, see <http://pzd-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Linh LD Son

Patent Examiner

A handwritten signature in black ink, appearing to read "J. S. S." with a stylized flourish at the end.